

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents  
United States Patent and Trademark  
Office  
Box PCT  
Washington, D.C.20231  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

<b>Date of mailing</b> (day/month/year) 09 May 2000 (09.05.00)	
<b>International application No.</b> PCT/GB99/02865	<b>Applicant's or agent's file reference</b> P92659WO
<b>International filing date</b> (day/month/year) 31 August 1999 (31.08.99)	<b>Priority date</b> (day/month/year) 28 August 1998 (28.08.98)
<b>Applicant</b> TURNER, Philip, John	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
28 March 2000 (28.03.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No.: (41-22) 740.14.35</p>	<p>Authorized officer Pascal Piriou</p> <p>Telephone No.: (41-22) 338.83.38</p>
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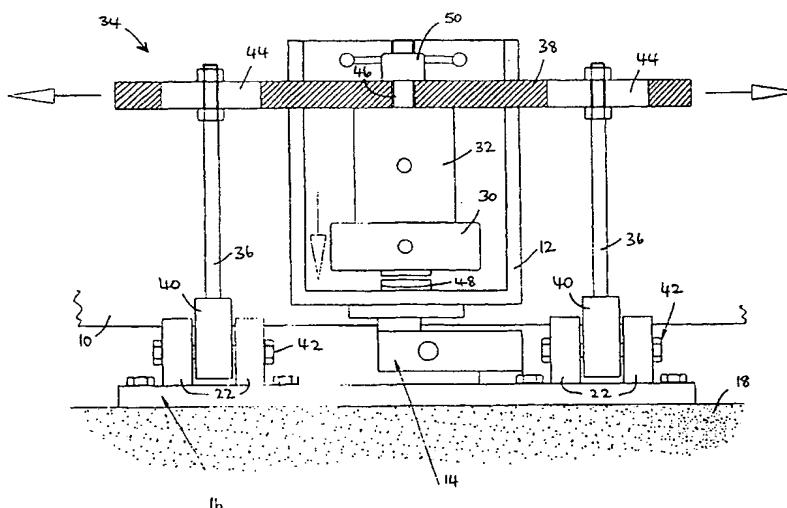
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## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> : <b>G01G 23/01, G01L 25/00</b>		<b>A1</b>	(11) International Publication Number: <b>WO 00/12976</b>
			(43) International Publication Date: 9 March 2000 (09.03.00)
(21) International Application Number: PCT/GB99/02865 (22) International Filing Date: 31 August 1999 (31.08.99) (30) Priority Data: 9818678.6                      28 August 1998 (28.08.98)                      GB (71) Applicant (for all designated States except US): WEIGHING LOGISTICS LTD. [GB/GB]; Blackthorne Road, Colnbrook, Slough, Berkshire SL3 0AP (GB). (72) Inventor; and (75) Inventor/Applicant (for US only): TURNER, Philip, John [GB/GB]; Yew Cottages, 87 The Street, Rotherwick, Hook, Hampshire RG27 9BG (GB). (74) Agent: URQUHART-DYKES & LORD; 1 Richfield Place, 12 Richfield Avenue, Reading RG1 8EQ (GB).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	

(54) Title: DEVICE AND METHOD FOR CALIBRATING A WEIGHING APPARATUS



## (57) Abstract

A system for calibrating a plurality of weighing installations of the kind having a working configuration of at least one working load cell (14) with a fixed side and a load-bearing side, a support (16) for the fixed side of the load cell, and a load (12) operatively mounted on the load-bearing side of the load cell, comprises portable apparatus moveable between installations to be calibrated, and fixed apparatus at each installation to be calibrated. The portable apparatus includes a reference load cell (30) and a fluid ram (32), the fixed apparatus includes anchorage means (22) fast with the working load cell support (16), and the reference cell and the ram are removably connectable between the anchorage means and the load-bearing side of the working load cell to apply calibrating loads to the working load cell in its working configuration. As many rams and reference cells may be provided as there are working load cells for any weighing installation.

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EE	Estonia	LR	Liberia	SG	Singapore		

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/02865

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01G23/01 G01L25/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01G G01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CA 1 211 954 A (KARPA MICHAEL J) 30 September 1986 (1986-09-30)  page 5, line 26 -page 6, line 17; figure 1	1-4, 6, 13, 15, 17, 18
X	DE 34 47 382 A (SCHENCK AG CARL) 3 July 1986 (1986-07-03) abstract; figures 1, 2	1, 17
A	US 5 257 668 A (SARGENT MICHAEL P ET AL) 2 November 1993 (1993-11-02) column 3, line 10 -column 4, line 13; figure 1	1, 17

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

20 December 1999

Date of mailing of the international search report

12/01/2000

Name and mailing address of the ISA

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Authorized officer

Ganci, P

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International Application No

PCT/GB 99/02865

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
CA 1211954	A	30-09-1986	US 4658921 A	21-04-1987
DE 3447382	A	03-07-1986	NONE	
US 5257668	A	02-11-1993	NONE	

PATENT COOPERATION TREATY

PCT

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REC'D 15 NOV 2000

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

15

Applicant's or agent's file reference P92659WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB99/02865	International filing date (day/month/year) 31/08/1999	Priority date (day/month/year) 28/08/1998
International Patent Classification (IPC) or national classification and IPC G01G23/01		
Applicant WEIGHING LOGISTICS LTD. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 6 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  28/03/2000	Date of completion of this report  13.11.2000
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Götsch, S  Telephone No. +49 89 2399 2765



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB99/02865

**I. Basis of the report**

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).):*

**Description, pages:**

1-11 as originally filed

**Claims, No.:**

1-21 as originally filed

**Drawings, sheets:**

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/02865

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Yes:	Claims	4,5,11-16,18-21
	No:	Claims	1-3,6-10,17
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-21
Industrial applicability (IA)	Yes:	Claims	1-21
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**



**R Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Cited document:**

Reference is made to the following document:

D1: CA-A-1 211 954

D2: DE-A-34 47 382.

**2. Objection on novelty against the subject-matter of claim 1:**

**2.1 Following the wording of present claim 1, D1 discloses:**

- a) a system for calibrating a plurality of weighing installations of the kind (cf. p. 2, l. 1-5) having
- b) a working configuration (ref. 1-2-3 in Fig. 1) of at least one working load cell (ref. 2 in Fig. 1) with a fixed side and a load-bearing side (see Fig. 1),
- c) a support for the fixed side of the load cell (ref. 3 in Fig. 1), and
- d) a load operatively mounted on the load-bearing side of the load cell (ref. 10 in Fig. 1), comprising
- e) portable apparatus moveable between installations to be calibrated (ref. 8-18 in Fig. 1), and
- f) fixed apparatus at each installation to be calibrated (ref. 1-3 in Fig. 1), wherein
- g) the portable apparatus includes a reference load cell (ref. 10 in Fig. 1) and a fluid ram (ref. 12 in Fig. 1),
- h) the fixed apparatus includes anchorage means for fastening with the working load cell support (ref. 4 and 16 in Fig. 1), and
- i) the reference load cell and the ram are removably connectable between the anchorage means and the load-bearing side of the working load cell to apply calibrating load to the working load cell in its working configuration (cf. Abstract and p. 3, l. 10-13).

Since all the features of present claim 1 are disclosed in D1, the subject-matter of present claim 1 is not novel over D1 in the sense of Art. 33(2) PCT.

**2.2 As a further example of the broad formulation of present claim 1, reference is made**

to D2 (see in particular Abstract and Fig. 1 of D2), over which the subject-matter of present claim 1 is also not novel in the sense of Art. 33(2) PCT.

2.3 The same arguments against novelty (Art. 33(2) PCT) apply mutatis mutandis to the subject-matter of present method claim 17.

3. Objection on novelty/inventive step against the subject-matter of dependent claims:

Dependent claims 2 to 16 and 18 to 21 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, the reasons being as follows:

claims 2-3: not novel: see plate located between ref. 2 and 3 in Fig. 1 of D1; ref. 7 in Fig. 1 of D2.

claims 4-5: not inventive: The provision of two pairs of parallel upstanding webs is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to provide alternative anchorage means. No particular advantage is herewith achieved. The same is valid for the ferromagnetic-electromagnetic anchoring.

claims 6-8: not novel: see Fig. 1 and cf. p. 6, l. 12-15 of D1; see Fig. 1 and cf. p. 5, l. 19-23 of D2.

claims 9-10: not novel: see ref. 1 in Fig. 1 of D1; see ref. 1 in Fig. 1 of D2..

claims 11-12: not inventive: The provision of a washer implies just a slight constructional change in the system of either D1 or D2 is defined which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. The same argument applies to the subject-matter of claim 12. Consequently, the subject-matter of claim 11 lacks an inventive step.

claims 13-16+18-21: not inventive: The provision of a network of reference load cells and fluid rams implies just a slight constructional change in system of either D1 or D2 which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen, ie. to achieve an instantaneous calibration of the working load cells. Indeed, the networking is considered just a

juxtaposition of known systems without any further technical effect other than the known obtained by a single system. Consequently, the subject-matter of claims 13 to 16 lacks an inventive step.

4. Industrial applicability:

Beyond any doubt, the system for calibrating and the method of calibrating a plurality of weighing installations according to present claims 1 to 21 is industrially applicable in the sense of Art. 33(4) PCT.

**Re Item VII**

**Certain defects in the international application**

1. The features of the claims are not provided with reference signs placed in parentheses (R. 6.2(b) PCT).
2. Independent claims 1 and 17 are not in the two-part form in accordance with R. 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from either D1 or D2 being placed in the preamble (R. 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (R. 6.3(b)(ii) PCT).

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>P92659W0</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/GB 99/ 02865</b>	International filing date (day/month/year) <b>31/08/1999</b>	(Earliest) Priority Date (day/month/year) <b>28/08/1998</b>
Applicant <b>WEIGHING LOGISTICS LTD. et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**DEVICE AND METHOD FOR CALIBRATING A WEIGHING APPARATUS**

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1  
☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/02865

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01G23/01 G01L25/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01G G01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CA 1 211 954 A (KARPA MICHAEL J) 30 September 1986 (1986-09-30)  page 5, line 26 -page 6, line 17; figure 1 ---	1-4,6, 13,15, 17,18
X	DE 34 47 382 A (SCHENCK AG CARL) 3 July 1986 (1986-07-03) abstract; figures 1,2 ---	1,17
A	US 5 257 668 A (SARGENT MICHAEL P ET AL) 2 November 1993 (1993-11-02) column 3, line 10 -column 4, line 13; figure 1 -----	1,17



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## ° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

20 December 1999

Date of mailing of the international search report

12/01/2000

Name and mailing address of the ISA

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Authorized officer

Ganci, P

# INTERNATIONAL SEARCH REPORT

Information on patent family members

national Application No

PCT/GB 99/02865

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
CA 1211954	A	30-09-1986	US 4658921 A	21-04-1987
DE 3447382	A	03-07-1986	NONE	
US 5257668	A	02-11-1993	NONE	